

MURGULESCU, I. G.; SAHINI, V. E.; SEGAL, M.; DAMASCHIN, M.

Spectra of vibration and structure of complexes
of thiosulfate with copper and silver. Studii
cerc chim 12 no. 1:27-30 Ja '64.

1. Center of Physical Chemistry of the Rumanian
Academy, Bucharest.

PISMANIK, K.M.; SEGAL', M.G.

Using the inclination of cutting-head spindles in cutting bevel gears.
Stan.i instr. 32 no.2:22-27 F '61. (MIRA 14:2)
(Gear cutting)

SECAL¹, M.G.

Improving the engagement of subangular bevel gears. Stan.1
instr. 33 no.5:9-14 My '62. (MIRA 15:5)
(Gearing, Bevel)

SEGAL', M.G.

Characteristics of bevel and hypoid gear transmissions with
helical surfaces of gear-wheel teeth. Stan. 1 instr. 36
no.11:20-22 N '65. (MIRA 18:11)

SEGAL', M.G., inzh.

Correction of the rolling movement in cutting the wheels
of subangular bevel gears. Izv. vys. ucheb. zav.; mashinostr.
no.9:14-26 '63. (MIRA 17:3)

1. Saratovskiy politekhnicheskiy institut.

SEGAL', M.G.

Double two-way cutting of bevel gears with teeth of even height.
Stan.1 instr. 34 no.4:19-21 Ap '63. (MIRA 16:3)
(Gear cutting)

VASIL'YEV, D.V.; MALYSHEV, M.S.; SEGAL', M.I.

Small size stationary jib cantilever crane. Pats. predl. na gor.
elektrotransp. no.9:20-22 '64. (MIRA 18:2)

1. Vagonoremontnyy zavod Tramvayno-trolleybusnogo upravleniya
Leningrada.

SEGAL', M.N., inzh.

Choice of intermediate amplifiers for systems with optimum
control. Elektrotehnika 35 no.1:55-59 Ja '64.
(MIRA 17:2)

SEGAL', M.N., inzh.

Compensation of the delay of automatic control systems using
input signal switching techniques. Elektrotehnika 35 no.6:
28-31 Je '64. (MIRA 17:8)

GERSHANOVICH, G.I., inzhener. ~~SEKAL' M.S.~~ inzhener.; SOLOV'IEV, A.I., inzhener.

Experience in wintertime operation of concrete pumps. Gidr. stroi. 26
no.2:20-26 F '57. (MLRA 10:4)
(Pumping machinery) (Hydroelectric power stations)

Segal, M.S.

S-5

USSR/Morphology of Man and Animals - (Normal and Pathologic)
Pathologic Anatomy.

Abs Jour : Ref Zhur - Biol., No 3, 1958, 12483

Author : Nechayevskaya, M.P., Denisova, N.Ya., Segal', M.S.,
Bardug, P.A.

Inst : -
Title : Experimental Changes in the Tissues and Organs caused by
Cl. sordellii

Orig Pub : Sb. tr. Khar'kovsk. n.-i. in-ta vaktsin i syvorotok, 1955,
21, 113-116

Abstract : A study was made of the organs of 32 guinea pigs that died
2-3 days after an intravenous injection of a Cl.sordellii
culture. There was a glassy edema in a section of the paw.
The muscles were flabby and could be easily torn. A micros-
copic study of soft tissues from the thigh at the site of
injection revealed a gas phlegmon. Among the viscera, the
most essential changes occurred in the cardiac muscle and

Card 1/2

SCIENCE
CATEGORY :

AES. JOUR. : REB101. : No.

1959, No. 10201

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT :

of tetanus antiserum into the infected mice; the animals remained healthy. A seasonal incidence is observed in cases of tetanus in people: a rise in May-July (field and garden work) and in September-October (gathering of the harvest). 65.9% of the cases were noted with wounds of the lower extremities. The mortality rate in tetanus, according to the data of the authors, ranges from 31.5 to 50%. The mortality rate depends on the duration of the incubation period as well as on the times of hospitalization. A direct relationship is noted
2/5

CARD:

USSR / Microbiology. Hygienic Microbiology.

F-4

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90849

Author : Segal', M. S.; Razumeyev, P. A.; Ryabchikova, V. P.

Inst : Not given

Title : Homemade Preserves as a Source of Botulism

Orig Pub : V sb.: Anaerobnyye infektsii. Kiyev, Gosmedizdat USSR, 1957, 145-147

Abstract : Three cases of poisoning are described in individuals with clinical symptoms of botulism after having partekane of homemade preserves prepared from pork which had been sealed under antiseptic conditions. The meat was boiled with the seasonings, cut into small pieces, and placed in a jar along with tomatoes, and pork fat was poured over the top. The unsanitary part of the procedure involving the carcass of the pig could have favored its contamination with spores of the botulinus bacillus, and the sealing with

Card 1/2

KRUPENINA, M.M.; FEL'DMAN, A.Ya.; ZABELOTSKIY, L.M.; BUBNOV, P.I., red.;
SEGAL', N.M., red.; DMITRIYEVA, N.I., tekhn. red.

[Yarn beam frame without tensioning tent for ribbon looms] Bes-
shatrovaia navoinaia rama k lentotkatskomu stanku. Moskva, Gos.
nauchno-tekhn. izd-vo M-va legkoi promyshl. SSSR, 1956. 34 p.
(MIRA 11:10)

1. Russia (1923- U.S.S.R.) Ministerstvo legkoy promyshlennosti.
Byuro tekhnicheskoy informatsii.
(Looms)

FEDENYUK, V.G., kandidat tekhnicheskikh nauk; SAVOSTITSKIY, A.V., retsenzent;
VORONIN, G.M., retsenzent; SEGAL', N.M., redaktor; DMITRIYEVA, N.I.,
tekhnicheskii redaktor

[Methods of gluing parts of sewn goods] Metody kleevogo soedineniia
detalei shveinykh izdelii. Moskva, Gos. nauchno-tekhn. izd-vo
Ministerstva legkoi promyshl. SSSR, 1956. 89 p. (MLRA 9:11)
(Glue) (Clothing industry)

KVEK, German Germanovich; ~~SEGAL~~¹, N.M., redaktor; MEDVEDEV, L.Ya.,
tekhnicheskiiy redaktor

[Multishuttle loom with a jacquard for producing heavy decorative
fabrics] Mnogochelnochnyi tkatskii stanok s zhakkardovoi mashinoi
dlia vyrabotki tiazhelykh dekorativnykh tkanei. Moskva, Gos.
nauchno-tekhn. izd-vo Ministerstva legkoi promyshl. SSSR, 1956.
103 p. (Looms)

(MLRA 10:3)

CHERNYY, M.D.; GINTS, I.P., retsenzent; SEGAL', N.M., redaktor; KOGAN, V.V.,
tekhnicheskiy redaktor

[Construction and maintenance reeling machines in the silk industry]
Ustroistvo i obsluzhivanie metal'nykh mashin shelkovoï promyshlennosti.
Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva legkoï promyshl.SSSR,
1956. 146 p. (MIRA 10:3)
(Silk manufacture) (Textile machinery)

POSTNIKOV, Aleksandr Konstantinovich; STEPANOV, Anatoliy Alekseyevich;
PIMENOV, Ivan Ivanovich; SHARIKOV, I.M., retsenzent; SEGAL', N.M.,
redaktor; MEDVEDEVA, L.A., tekhnicheskiiy redaktor

[OPL-2 wringing and rinsing machine for retted flax] Otzhimno-
promyvnaia mashina OPL-2 dlia l'nianoi tresty. Moskva, Gos.nauchno-
tekhn.izd-vo M-va legkoi promyshl. SSSR, 1957. 33 p. (MLRA 10:9)
(Flax)

SEGEL' N.M.

ISTOMINA, Tat'yana Ivanovna; SUCHKOV, Ivan Yevodimovich; KATKOV, G.G.,
spetsredaktor; SEGEL' N.M., red.; KOGAN, V.V., tekhn.red.

["Kovo" company's warping machine] Partionnaisia snoval'naisia mashina
firmy "Kovo." Moskva, Gos. nauchno-tekhn.izd-vo M-va legkol
promyshl. SSSR, 1957. 56 p. (MIRA 11:4)
(Warping machines)

KARASEV, Ivan Mikhaylovich; SEGAL', N.M., redaktor; MEDVEDOVA, L.A.,
tekhnicheskiiy redaktor

[Over-all mechanization of production; practices of the Naro-Fominsk
Spinning and Weaving Mill] Kompleksnaya mekhanizatsiya proizvodstva;
iz opyta raboty Naro-Fominskoi priadil'no-tkatskoi fabriki. Moskva,
Gos.nauchno-tekhn. izd-vo M-va legkoi promyshl. SSSR, 1957. 74 p.
(Textile machinery) (MIRA 10:9)

SEGAL, N. M.

LETUNOVSKAYA, A.A.; GOL'TSEV, N.V.; SEGAL', N.M., redaktor; KOGAN, V.V.,
tekhnicheskii redaktor

[Organization of the work of an assistant weaver operating looms
with bottom ribs] Organizatsiia truda pomoshchnika mastera,
obsluzhivaiushchego mekhanicheskie tkatskie stanki s nizhnim
boem. Moskva, Gos.nauchno-tekhn.izd-vo M-va legkoi promyshl.
SSSR, 1957. 98 p. (MIRA 10:7)

1. Russia (1923-
(Weaving)

U.S.S.R.) Ministerstvo legkoy promyshlennosti.

SEGAL' N.M.

ARTEMENKOV, Mikhail Alekseyevich; GEYSBERG, S.M., retsenzent; RYAUZOV, A.N.,
redaktor; SEGAL', N.M., redaktor; MEDVEDEV, L.Ya., tekhnicheskii
redaktor

[Safety engineering in the manufacture of viscose fiber, cellophane,
and caprone silk] Tekhnika bezopasnosti pri proizvodstve viskoznogo
volokna, tsellofana i kapronovogo shelka. Pod red. A.N.Riauzova.
Moskva, Gos.nauchno-tekhn.izd-vo M-va legkoi promyshl.SSSR, 1957.
140 p. (MLRA 10:8)

(Textile industry--Safety measures)

STERLIN, Yefim Abramovich; ZAMAKHOVSKIY, L.I., retsenzent; DOKHMAN, Ya.4.,
retsenzent; SNIGAL', N.M., redaktor; DMITRIYEVA, N.I., tekhnicheskii
redaktor

[Principles of engineering standardization in textile manufacturing]
Osnovy tekhnicheskogo normirovaniya v tekstil'nom proizvodstve.
Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po legkoi promyshl., 1957.
177 p. (MLR 10:10)
(Textile industry)

SEGE L N. M.
KAZMIN, Nikolay Tikhonovich; ZHIVOV, Kirill Ivanovich; KUPRIYANOV, Fedor
Sergeyevich; SIMAKIN, V.V., retsenzent; SEGE L N. M., redaktor;
DMITRIYEVA, N.I., tekhnicheskij redaktor

[Reeding section and knotting machines of the weaving industry]
Probornyi otdel i usloviyazal'nye mashiny tkatskogo proizvodstva.
Moskva, Gos. nauchno-tekhn. izd-vo M-va legkoi promyshl.SSSR,
1957. 182 p. (MLRA 10:6)
(Weaving)

SECRET

NIKITIN, Mikhail Nikitich; KURANOVA, N.V., retsenzent; SEGAL', N.M., red.;
KOGAN, V.V., tekhn.red.

[Working principle and operation of machines used in the
preparatory processes of wool weaving] Ustroistvo i obsluzhivanie
mashin prigotovitel'nogo otdela sherstokachestva. Moskva, Gos.
nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1957. 286 p.
(MIRA 11:1)

(Woolen and worsted manufacture)

LIPEIKOV, Yakov Yakovlevich; GOL'DENBERG, M.K., retsenznet; SEGAL', N.M.,
red.; KNAKNIN, M.T., tekhn.red.

[Comb spinning of wool] Grebennoe prisdienie shersti. Moskva, Gos.
nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1957. 396 p.
(MIRA 11:5)

(Woolen and worsted manufacture)

SHAGOVA, Yevgeniya Nikolayevna; GLOTSER, Lev Moiseyevich; VIGANT, Tamara
Avgustovna; MUZYLEV, L.T., nauchnyy red.; SEGAL', N.M., red.;
DMITRIYEVA, N.I., tekhn. red.

[Carding machines of the Befama and Textima companies] Chesal'nye
mashiny firm Befama i Tekstima. Moskva, Gos. nauchno-tekhn. izd-
vo lit-ry legkoi promyshl., 1958. 107 p. (MIRA 11:10)
(Carding machines)

YEFREMOV, Sergey Mikhaylovich; ZHIVOV, Kirill Ivanovich; NOVIKOV, A.K.,
retsenzent; SEGAL', N.M., red.; KNAKNIN, M.T., tekhn.red.

[AT-175-L1 automatic loom with a Zh-13 Jacquard machine] Avto-
matischenkii tkatskii stanok AT-175-Li s zhakkardovoi mashinoi
Zh-13. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po legkoi prom.,
1958. 111 p. (MIRA 12:2)

(Looms)

MEYEROVICH, Grigoriy Mikhaylovich; SHUMOV, Nikolay Sergeyevich; PEVZNER, M.I.,
retsensent; NIKITIN, N.T., red.; SEGAL', N.M., red.; MEDVEDEV, L.Ya.,
tekhn.red.

[Finance and credit for light industry] Finansirovanie i kreditovanie
predpriatii legkoi promyshlennosti. Moskva, Gos.nauchno-tekhn.
izd-vo lit-ry po legkoi promyshl., 1958. 241 p. (MIRA 11:12)
(Industry--Finance)

GORDEYEV, Vasil'y Aleksandrovich, prof.; VOLKOV, Pavel Vasil'yevich,
dotsent; MARKOV, N.F., retsenzent; BLYUYER, V.A., retsenzent;
GORITSKIY, S.G., retsenzent; KULIGIN, A.V., retsenzent; SEGAL',
N.M., red.; MEDVEDEV, L.Ya., tekhn.red.

[Weaving] Tkachestvo. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry
po legkoi promyshl., 1958. 550 p. (MIRA 12:3)
(Weaving)

MAGNITSKIY, Aleksandr Aleksandrovich, kand.tekhn.nauk; TERYUSHNOV, A.V.,
retsensent; SEGAL', N.M., red.; KNAKNIN, M.T., tekhn.red.

[Effect of new techniques on labor productivity and capital
assets in the cotton spinning industry] Vliianie elementov
novoi tekhniki na proizvoditel'nost' truda i osnovnye fondy
v khlopkopriadil'nom proizvodstve. Moskva, Gos.nauchno-
tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 180 p.
(MIRA 13:1)

(Cotton manufacture)

LIBERMAN, Abram Moiseyevich, dotsent, kand.ekonom.nauk; POLYAK, T.B., dotsont, retsenzent; SEBAL', N.M., red.; KNAKNIN, M.T., tekhn.red.

[Labor productivity and calculation of time expended per unit of production at enterprises of the wool industry] Proizvoditel'nost' truda i raschet trudoemkosti produktsii na predpriyatiakh sherstianoi promyshlennosti.. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po legkoi promyshlennosti, 1959. 185 p.

(MIRA 13:11)

(Wool industry--Labor productivity) (Time study)

SUSLOV, Nikolay Nikolayevich; LEVITSKIY, Igor' Nikolayevich; MAKEYEVA,
V.S., red.; SEGAL', N.M., red.; MEDVEDEV, L.Ya., tekhn.red.

[Equipment assembly and repair in enterprises for the primary
processing of bast fibers] Montazh i remont oborudovaniia
zavodov pervichnoi obrabotki lubiannykh volokon. Moskva, Gos.
nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 287 p. (MIRA 13:4)

(Textile machinery)

PETRUSHOV, A., doktor ekonom.nauk; AFANAS'YEV, L.A., kand.ekonom.nauk;
DANILEVICH, M.V., kand.ekonom.nauk; YEGIAZAROVA, N.A., kand.ekonom.
nauk; KOVALEV, Ye.V.; KOL', M.A.; KUZNETSOV, B.P., kand.ekonom.
nauk; KUTSOBINA, N.K.; MARTYNOV, V.A., kand.ekonom.nauk; MEN'SHI-
KOVA, M.A.; NIKITENKO, B.A.; ONUFRIYEV, Yu.G.; PROKHOROVA, G.N.;
RYDVANOV, N.F.; SEGAL', N.M., kand.istor.nauk; UKHOVA, A.M.; FARIZOV,
I.O., kand.istor.nauk; SHIFRIN, E.L., doktor ekonom.nauk; SHLIKHTER,
A.A., kand.ekonom.nauk; LISOVSKIY, Yu.P.; MARTYNOV, V.D.; GARSIA, L.,
red.; MOSKVIN, R., tekhn.red.

[Agriculture of capitalist countries; a statistical manual] Sel'skoe
khoziaistvo kapitalisticheskikh stran; statisticheskii spravochnik.
Otvet.red.A.Petrushov. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1959.
829 p. (MIRA 13:6)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh
otnosheniy.
(Agriculture--Statistics)

SEGAL, P.;MAJKOWSKI, J.

Electroencephalography in glaucoma. Klin. oczna 23 no.2:101-112 1953.
(CLML 24:5)

1. Of the Eye Clinic (Head--Prof. W. H. Melanowski, M.D.) and of the
Neurological Clinic (Head--Prof. A. Opalski, M.D.), Warsaw Medical
Academy.

EXCERPTA MEDICA Sec.12 Vol.9/10 Ophthalmology Oct55

1583. SEGAL P., JANISZEWSKA-GELDNER B., CZECHOWSKA Z. and RUDZKI E.
*Klin. Ocznej A. M., Warszawa; Zakt. Anat. patol., Warszawa. *Wplyw ko-
feiny i uretanu na przebieg oparzeń oczu u królików. Effect of caffeine
and urethan on the course of eye burns in rabbits POST.
OKULISTYKI 1954, 1 (143-166) Graphs 9 Tables 2 illus. 19

Large doses of caffeine are noxious to the course of eye burns with HCl. Urethan
gives an improvement when administered in narcotic amounts and then it has a be-
neficial influence upon the amount and course of exudative and productive stages in
the corneal tissue. The morphology of the blood was the same (if compared with a
control). The authors suggest the neural mechanism of action of the drug mention-
ed. The limitation and diminution of the pain is emphasized and stressed as it has
an irritant influence upon the course of the disease.

Szmyt - Łódź

SEGAL, P.

POL.

✓ The effect of caffeine and urethan on the course of eye-burns in rabbits. P. Segal, B. Janiszewska-Geldner, Z. Czechowski, and B. Ruzicki (School Med., Warsaw). *Bull. Acad. Polon. Sci., Classe II*, 2, 79-82 (1954).—A drop of 2% HCl was instilled into the cornea of 28 rabbits anesthetized with 6% cocaine, after 60 sec. the eye was rinsed with physiol. saline for 30 sec., the rabbits were divided into groups, and a study of the influence of the central nervous system on eye-burns was made on each group. No medication was given to group I as control. Group II was injected subcutaneously twice daily for 110 days with 0.04 g. caffeine per kg. of body wt. This caused a more acute course of the burns of the eyes, the animals showed great excitability and restlessness; photophobia, congestion of the conjunctiva, and the lesions disappeared slowly owing to exhaustion of the central nervous system resulting from the prolonged state of excitement of the higher nervous centers under the effect of caffeine. Group III was injected with doses of 0.7 g./kg. of caffeine, producing sleep similar to physiol. sleep, which had a more favorable effect than larger doses of 1.4 g./kg. urethan, which produce narcotic sleep. The alterations were the least marked, such as weak symptoms of inflammation, photophobia, and congestion; all persisted half as long as in the control animals. The functional state of the eyes in rabbits, and tends to prove that, in cases of eye burns in man, excessive stimulants of the central nervous system have an unfavorable effect on the eye condition. O. L. B.

SEGAL, Pawel; KOWALSKA, Maria

Hazard of allergic complications in local administration of
sulfonamides. Wiadomoaci lek. 7 no.10:543-547 Oct 54.

(SULFONAMIDES, injurious effects,
allergic reactions in local admin., hazards)

(ALLERGY,
to sulfonamides in local admin., hazards)

SEGAL P.

Klin. dermat. A.M. i Klin. Chor. Oczu A.M., Warszawa. *Układowe zmiany tkanki sprężystej -
elastosis dystrophica (Pseudoxanthoma elasticum). Elastosis dystrophica
(pseudoxanthomaelasticum) POL. TYG. LEX. 1954, 9/1 (4-8 and 3) illus. 9

SO: Excerpta Medica
Section XIII
Vol. 9 No. 1

SEGAL, Pawel

Ocular changes in so-called diseases of the connective tissue.
Klin. oczna 24 no.2:113-120 1954.

1. Z Kliniki Chorob Oczu Akademii Medycznej w Warszawie. Kierownik: prof. dr W.H.Melanowski.

(EYE, in various diseases,

*collagen dis.)

(COLLAGEN DISEASES, physiology,

*eye)

SEGAL, Pawel; ZYLO-FILIPOWICZ, Alina

Local cortisone therapy of parenchymatous keratitis. Klin.
oczn. 24 no.2:133-137 1954.

1. Z Panstwowego Instytutu Dermatologii i Wenerologii. Dyrektor:
dr med. J. Suchanek. 2. Z Kliniki Chorob Oczu Akademii Medycznej
w Warszawie. Kierownik: prof. dr Wl. H. Melanowski.

(CORTISONE, therapeutic use,
*keratitis, local admin.)

(KERATITIS, therapy,
*cortisone, local admin.)

SEGAL, Pawel; KOZLOWSKI, Jan

Abortive forms of Bourneville syndrome. Przegl.derm.,Warsz.
5 no.1:5-13 Jan-Feb '55.

1. Z Kliniki Dermatologicznej Akademii Medycznej w Warszawie
Dyrektor: prof.dr S. Jablonska. Warszawa, Klinika Dermatologiczna
Akademii Medycznej, ul. Koszykowa 82 a.

(TUBEROUS SCLEROSIS, manifestations
abortive forms)

SZAPIRO, Jerzy; SEGAL, Pawel

Correlation of micropsia with disturbances of accommodation.
Neur. &c. polska 5 no.6:637-642 Nov-Dec 55.

1. Z Kliniki Neurochirurgii A.M. w Warszawie. Kierownik: prof.
dr. J. Chorobski, 1 z Kliniki Ocznej A.M. w Warszawie. Kierownik:
prof. dr. W. H. Melanowski.

(ACCOMMODATION, OCULAR

paralysis, with micropsia)

(VISION

disord., paralysis of accomm. with micropsia)

SEGAL, P

POLSKA

✓ Mutual dependence of dark adaptation and vitamin A level in blood serum. Stanislaw Berger and Pawel Segal (State Inst. Hyg., Warsaw). *Roczniki Państwowego Zakładu Hig.* 6, 47-54(1955)(English summary).—Fairly good correlation was found between dark adaptation tests and blood serum vitamin A levels among 23 persons in the age range 24-67 years, some of whom had reported eyesight disturbances. Alina S. Szczepaniak

SEGAL, Pawel

Pathogenesis of glaucoma. Klin.ocsna 25 no.3:155-168 1955.
(GLAUCOMA, etiology and pathogenesis,)

EXCERPAT MEDICA Sec.12 Vol.11/10 Ophthalmology Oct57
SEGAL P

1674. SEGAL P. and JANISZEWSKA-GELDNER B. Klin. Chorób Oczu A.M.,
Warszawa. * Powikłania operacji przeciwjaskrowych. Complications of
antiglaucomatous operations POST. OKULIST. 1956, 3 (154-176)
Tables 6

Clinical observations on the 410 cases of glaucoma operated on in the Warsaw Eye
Clinic are summarized. The most frequent operation was Lagrange's sclerecto-
iridectomy, iridectomy and cyclodialysis. Others were performed more rarely.
The most frequent complication was haemorrhage in the anterior chamber; there
were 4 cataracts, 2 cases of loss of vitreous and one of uveitis. The author stress-
es the necessity of performing those operations which may be best done from the
point of view of personal experience.

Szmyt - Łódź

SECH, PAWEŁ

• POLAND/Human and Animal Physiology - Physiology of Labor and Sports.

V-10

Abs Jour : Ref Zhur - Biol., No 4, 1958, 18722

Author : Paweł Segul and Stanisław Berger

Inst :

Title : The Effect of Physical Exertion on the Function of the Visual Organ and the Level of Vitamin A in the Blood Serum.

Orig Pub : Acta Physiol. polon., 1956, 7, No 1, 51-64

Abstract : A study was made of the effect of running a distance of 1200 meters through broken terrain on certain functions of the eyes of men, aged 21 and 22, who were not in training and men in training for seven weeks. In both groups visual acuity was substantially unchanged after the run. Among the majority of those not in training a reduction in the visual fields for white, green and red was noted, as well as removal of the far point to a greater distance and a reduction in dark adaptation. In the majority of

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POLAND/Human and Animal Physiology - Physiology of Labor and
Sports.

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Abs Jour : Ref Zhur - Biol., No 4, 1958, 18722

those in training, on the other hand, the corresponding visual fields were extended, the far point was moved further away and the near point was brought closer; dark adaptation remained almost unchanged. Fluctuations in the vitamin A content of the serum, although appreciable in a number of cases, were irregular.

Card 2/2

SEGAL, Pawel; BERGER, Stanislaw

Role of vitamin A and of its derivatives in vision. Postepy
wiedzy med. 4 no.2:127-144 Apr-June 57.

(VISION, physiology,
vitamin A & its deriv. in, review (Pol))

(VITAMIN A, physiology,
in vision, vitamin A & its deriv., review (Pol))

54222
EXCERPTA MEDICA Sec.12 Vol.11/9 Ophthalmology Sept 57

1402. SEGAL P., FREYTAG T. and CZECHOWSKA Z. Zakł. Anat. Patol. A. M.,
Warszawa. * Badania nad zastosowaniem mas plastycznych w doświadczal-
nych ranach twardówki u królików. Investigations on plastic ma-
terial in the experimental wounds of the sclera in rab-
bits KLIN. OCZNA 1957, 27/1 (9-13) Illus. 9

In 12 rabbit eyes wounds were inflicted and then covered with tiny plastic plates.
Anatomopathological examination was carried out. The observations were con-
tinued up to 3 months. Some plates were isolated, some grew into the sclera. The
histological examination showed better tolerance than to catgut sutures.

Szmyt - Łódź

SEGAL, Pawel; FREYTAG, Tadeusz; SOKOLOWSKI, Stefan

Use of rapid polymerizing acryl masses in orbital surgery.
Klin. oczna 27 no.2:143-156 1957.

1. Z Oddzialu Ocznego C.W.S.K. Ordynator: doc. dr. P. Segal.
Z Pododdzialu Chirurgii Szczekowej C.W.S.K. Kierownik: dr.
T. Freytag i z Oddzialu Neurochirurgii C.W.S.K. Ordynator: dr.
med. S. Sokolowski. Warszawa 12, ul. J. Dabrowskiego 77 m. 27.

(ORBIT, surg.

plastic, use of rapid polymerizing acryl mass (Pol))

(ACRYLIC RESINS

rapid polymerizing acryl mass, use in orbital surg. (Pol))

SEGAL, Pawel; RUSZKOWSKI, Marian; WILK-WILCZYNSKA, Maria

Electrophoretic examination of aqueous humor in uveitis. Klin. oczna
27 no.4:563-576 1957.

1. Z Oddzialu Ocznego C.W.S.K. Ordynator: doc. dr med. P. Segal.
Z Kliniki Interny Polowej A. M. w Lodzi Kierownik: doc. dr med.
A. Himmel Z Kliniki Ocznej A. M. w Lodzi Kierownik: prof. dr med.
J. Sobanski

(AQUEOUS HUMOR, in various dis.

uveitis, α & gamma globulin content, electrophoresis (Pol))

(SERUM GLOBULIN, determ.

α globulin in aqueous humor in uveitis, electrophoresis (Pol))

(GAMMA GLOBULIN, determ.

in aqueous humor in uveitis, electrophoresis (Pol))

(UVEITIS, metab.

α & gamma globulin content in aqueous humor, electrophoresis
(Pol))

JABLONSKA, Stefania, SEGAL, Pawel, MILEWSKI, Boguslaw, DABROWSKA, Halina

Does the ocular pemphigus belong to the pemphigus group. Przegl.
derm. Warsz. 8 no.2:135-147 Mar-Apr '58

1. Z Kliniki Dermatologicznej A.M. w Warszawie, Kierownik: prof. dr
S Jablonska. Z Kliniki Okulistycznej A.M. w Warszawie. Kierownik:
prof. dr W.H. Melanowski. Adres: Warszawa, Klinika Dermatologiczna
Akad. Med., ul. Koszykowa 82 a.

(PEMPHIGUS, manifest.

ocular, classif. (Pol))

(EYE, in various dis.

pemphigus, classif. (Pol))

STEIN, W.; SEGAL, P.

Two cases of disseminated sclerosis with cataract. Neur. &c. polska
8 no.4:501-506 July-Aug 58.

1. Z Kliniki Neurologicznej z Kliniki Chorob Oczu W.A.M. w Lodzi.

Adres: Centr. Wojsk Szpital Kliniczny Lodz Zermoskiego 113.

(MULTIPLE SCLEROSIS, compl.

cataract (Pol))

(CATARACT, compl.

multiple sclerosis (Pol))

JABLONSKA, Stefania; SEGAL, Pawel

Atypical & abortive forms of Werner's syndrome. Polski tygod. lek. 13
no.40:1521-1527 6 Oct 58.

1. Z Kliniki Dermatologicznej A. M. w Warszawie; kierownik: prof. dr S.
Jablonska i z Oddziału Ocznego C.W.S.K. w Łodzi; ordynator: doc. dr P.
Segal Adres: Koszykowa 82 a; Klinika Dermatol. Ak. Med.

(PROGERIA

Werner's synd., atypical & abortive forms (Pol))

(CATARACT

same)

Segal P
RUSZKOWSKI, Marian; SEGAL, Pawel

Fractionation experiments with crystalline lens proteins. Klin.
oczn 28 no.1:5-10 1958.

1. Oddzialu Ocznego C.W.S.K. Ordynator: doc. dr med. P. Segal z Kliniki
Interny Polowej A. M. w Lodzi Kierownik: prof. dr med. A. Himmel.

Adres autora: Lodz, ul. Zeromskiego 113, C.W.S.K.

(CRYSTALLINE LENS,

proteins, fractionation by electrophoresis & analysis (Pol))

(PROTEINS,

of crystalline lens, fractionation & analysis (Pol))

SEGAL, P.; RUSZKOWSKI, M.; BURATOWSKI, J.

Electrophoresis of aqueous humor of anterior chamber in experimental
iritis in rabbits. Klin. oczna 28 no.3:315-321 1958.

1. Z Kliniki Ocznej W. A. M. Kierownik: doc. dr. med. P. Segal Z Kliniki
Interny Polowej A. M. w Lodzi Kierownik: prof. dr med. A. Himmel. Adres
autora: Warszawa 12 ul J. Dobrowskiego 77 m 27.

(IRITIS, exper.

electrophoresis of proteins in aqueous humor of anterior
chamber in rabbits (Pol))

(PROTEINS, metab.

aqueous humor of anterior chamber in iritis in rabbits,
electrophoresis (Pol))

(EYE, metab.

proteins in aqueous humor of anterior chamber in iritis
in rabbits, electrophoresis (Pol))

SEGAL, Pawel; KIKIEJA, Marian

Severe ocular complications during vaccinia virus infection. Polskie
tygod. lek. 14 no.4:162-165 26 Jan 59.

1. Z Oddzialu Ocznego C.W.S.K. w Lodzi; ordynator doc. dr med. P. Segal
Adres: Warszawa 12, ul. J. Dabrowskiego Nr 77 m. 26.

(VACCINIA, case reports
ocular vaccinia (Pol))
(EYE DISEASES, case reports
vaccinia (Pol))

SEGAL', P., dots, doktor meditsiny

Clinical observations on the use of insulin in ophthalmology. Oft.
zhur. 14 no.6:347-353 '59. (MIRA 13:4)

1. Iz kliniki glaznykh bolezney (zav. - doktor meditsiny dots. P.
Segal) Voenno-meditsinskoy akademii v Lodzi, Pol'sha.
(INSULIN) (EYE--DISEASES AND DEFECTS)

SEGAL, Pawel

Problem of injuries of the visual organ in boxing. Klin. oczna
29 no.4:363-376 '59.

1. Z Kliniki Chorob Oczu W. A. M. w Lodzi Kierownik: doc.
dr med. P. Segal.

(BOXING wds & inj)

(EYE wds & inj)

EXCERPTA MEDICA Sec 12 Vol 13/10 Ophthalmology Oct 59

1602. RARE COMPLICATIONS IN INJURIES INVOLVING THE CORNEA AND THE CORNEAL LIMBUS - Über seltene Komplikationen bei Hornhaut- und Hornhautrandverletzung - Segal P. and Waniewski E. Augenabt. und Pathol. Abt., Zentr. Klin. Krankenh., Łódź - KLIN. MBL. AUGENHEILK. 1958, 134/1 (93-97) illus. 5

The left eye of a boy was hurt by a knife - the epithelium of the cornea with some superficial stroma layers had been scaled off so that they were curled up near the limbs in the temporal-lower quadrant. Six weeks after the trauma a tumour of pink colour resembling a limbal cyst was removed under local anaesthesia. Histological examination showed that it was a solid, vascularized granuloma covered by normal corneal epithelium, Bowman's membrane, and some layers of corneal stroma.

Frey - Vienna

SEGAL, Pawel; ALICHNIEWICZ-CZAPLICKA, Halina; MRZYGLOD, Stanislaw

Studies on the effect of cortisone on the course ocular burns in experimental animals. Klin.oczna 30 no.1:95-102 '60.

1. Z Kliniki Chorob Oczu W.A.M. Kierownik: doc.dr med. P. Segal.
(EYE wds.& inj.)
(BURNS exper.)
(CORTISONE pharmacol.)

SEGAL, Pawel; ADAMCZEWSKA, Zofia; KRAWCZYK, Zofia

On the problem of certain ocular manifestations in thrombosis of the internal carotid artery. Klin. oczna 31 no.1:1-9 '61.

1. Z Kliniki Chorob Oczu W.A.M. w Lodzi Kierownik: doc. dr med. P. Segal.

(CEREBRAL EMBOLISM AND THROMBOSIS diag)
(FUNDUS OCULI)

SEGAL, Pawel; BROMOWICZ, Jan; ADAMCZEWSKA, Zofia; KRAWCZYK, Zofia;
STRZALKO, Mieczyslaw

Obstruction of the carotid artery from the ophthalmological viewpoint.
Klin. oczna 31 no.2:117-133 '61.

1. Z Kliniki Chorob Oczu WAM Kierownik: doc. dr med. P. Segal
Z Kliniki Neurochirurgicznej WAM Kierownik: kand. nauk med. dr
med. J. Bromowicz Z Kliniki Neurologicznej WAM Kierownik: doc.
dr med. W. Stein.
(EYE blood supply) (CEREBRAL EMBOLISM AND THROMBOSIS)

SEGAL, Pawel; JABLONSKA, Stefania

On the problem of congenital oculo-dermatological syndromes with
endocrine disorders. Klin. oczna 31 no.3:257-266 '61.

1. Z Kliniki Chorob Oczu WAM w Lodzi Z Kliniki Dermatologicznej
AM w Warszawie Kierownik: prof. dr med. S.Jablonska.
(SKIN dis) (DIABETES MELLITUS compl)
(CATARACT case reports)

SEGAL, Pawel; JABLONSKA, Stefania

Blepharochalasis associated with lip edema and goiter as a pathological syndrome. Klin. oczna 32 no.1:31-40 '62.

1. Z Kliniki Dermatologicznej AM w Warszawie Kierownik: prof. dr med. S. Jablonska i z Kliniki Chorob Oczu WAM w Lodzi.
(GOITER compl) (EYELIDS dis) (LIPS dis)
(EDEMA compl)

SEGAL, Pawel; MRZYGLOD, Stanislaw

Glaucoma as a complication of self-inflicted injuries. Klin. oczna
32 no-4:381-384 '62.

1. Z Kliniki Chorob Oczu w Lodzi. Kierownik: prof. dr med. P. Segal.
(GLAUCOMA) (EYE INJURIES)

SEGAL, Pawel; RYMCZONEK, Czeslaw

Ophthalmic changes in Waldenstrom's macroglobulinemia. Klin. oczna
32 no.3:253-262 '62.

1. Z Kliniki Chorob Oczu Kierownik: prof. dr med. P. Segal Z Kliniki
Neurologicznej w Lodzi Kierownik: wz. doc. dr med. J. Bromowicz.
(MACROGLOBULINEMIA) (EYE MANIFESTATIONS)

POLAND

SEGAL, Pawel, KIKIELA, Marian, MRZYGLOD, Stanislaw, and ZEROMSKA-ZBIERSKA, Izabela; Clinic of Eye Diseases (Klinika Chorob Oczu) WAM [Wojkowa Akademia Medyczna, Military Medical Academy] in Lodz (Director: Prof. Dr. med. P. SEGAL) and Eye Division (Oddzial Oczny), Military Hospital (Szpital Wojaskowy) in Zielona Gora (Ordynator: Dr. M. KIKIELA)

"On the Coexistence of the Familiar Form of Pigmentary Degeneration of the Retina with Kartagener Triade. Case Report."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 23, 3 Jun 63, pp 809-812.

Abstract: [Authors' English summary modified] Authors report a case of Kartagener triade, pigmentary degeneration of the retina, and congenital cataract. They review briefly the literature of this problem, and note that the changes observed in this syndrome are always due to developmental difficulty or degenerative changes, and may therefore have common pathological elements with the classical symptoms of the Kartagener triade. There are 21 references, about evenly divided between Polish, German, and Western publications.

1/1

SEGAL, Pawel; KIKIELA, Marian; MRZYGLÓD, Stanisław; ZEROMSKA-ZBIERSKA, Izabela

On the problem of coexistent familial pigmentary retinal degeneration and Kartagener's triad. Pol. tyg. lek. 18 no.23: 809-812 3 Je '63.

1. Z Kliniki Chorob Oczu WAM w Łodzi; kierownik: prof. dr med. P. Segal i z Oddziału Ocznego Szpitala Woj. w Zielonej Górze; ordynator: dr M. Kikiela.
(RETINITIS PIGMENTOSA) (KARTAGENER TRIAD)

SEGAL, Pawel; FREYTAG, Tadeusz; WANIEMSKI, Edward

The problem of rare neoplasms arising from the ciliary part of the retina (diktyoma). Klin. oczna 35 no.1:63-69 '65.

1. Z Kliniki Chorob Oczu (Kierownik: prof. dr. med. P. Segal);
z Kliniki Laryngologicznej (Kierownik: prof. dr. med. J. Borsuk);
oraz z Zakladu Anatomii Patologicznej Wojskowej Akademii Medycznej w Lodzi (Kierownik: prof. dr. med. A. Pruszczyński).

SEGAL, Pawel, prof. dr. med.; SMOLARZ-DUDAREWICZ, Jadwiga

Research on the use of glycerol in glaucoma. Klin. oczna 35
no.2:199-206 '65.

1. Z Kliniki Chorob Oczu w Lodzi (Kierownik: prof..dr. med.
P. Segal).

SEGAL, Pawel, prof. dr. med.; CHETKO, Edward; RDZANEK, Irena

Research on the role of corticosteroids in the pathogenesis of
mycotic corneal infections. Klin. oczna 35 no.2:337-342 '65.

1. Z Kliniki Chorob Oczu Akademii Medycznej w Lodzi
(Kierownik: prof. dr. med. P. Segal).

SEGAL, Pawel; CHETKO, Edward

The problem of mycotic eye diseases. Pol. tyg. lek. 20 no.24:
885-888 14 Je '65.

1. Z Kliniki Chorob Oczu Wojskowej AM (Kierownik: prof. dr. med.
P. Segal).

SEGAL, Pazel; JABLONSKA, Stefania; MRZYGLOD, Stanislaw

Neurotrophic changes in the choroid in scleroderma of the type
"en coup de sabre". Klin.oczna 30 no.4:381-388 '60.

1. Z Kliniki Chorob Oczu W.A.M. w Lodzi, Kierownik: doc. dr
med. P.Segal. Z Kliniki Dermatologicznej A.M. w Warszawie,
Kierownik: prof. dr med. S.Jablonska.
(SCLERODERMA pathol)
(CHOROID pathol)

Fermentation of sulfite waste liquors with the addition of molasses. R. Penikova and K. Segal., *Spiria-Voloskaya Prom.*, 14, No. 10-11, 47-52(1937); Chem. Zentr. 1938, II, 972 J; cf. C. A. 31, 7561^a.—Without the addn. of solder molasses the following results were observed: The addn. of the neutralizing agent (milk of lime) to the towers (in third filled) resulted in the destruction of the sugar. When the mixt. had settled, the acidity of the liquor increased. Settling basins, pipe connections, etc., were contaminated by yeast, bacteria and molds. For this reason, fermentation occurred even in the circulating system before the liquor reached the fermentation unit. As the contaminating yeast, etc., passed through the filter, clarification was incomplete and the yeast in the fermentation unit was contaminated by mineral salts and cellulose fibers. Treatment of the yeast with cellulose waste liquors having an acidity of 1.34° D. and a pH of 4.2 did not affect the fermenting power of the yeast. Secondary fermentation of the residual liquor after the distn. of the alc. was not possible. When molasses was added to the crude sulfate waste liquor having an acidity of 1.5–2.0° D. and at a temp. of 50–60°, no hydrolysis of the sucrose took place. At a sugar concn. of 3% and more in the sulfite wastes the yeast fermented the sugar completely; after fermentation vats, therefore, were not required. When the sulfite liquors contg. more molasses were fermented, mechanical contamination of the yeast in the fermentation vats was

The amt. of yeast increased more than 3-fold; bacterial contamination likewise increased. The alc. yield per cu. m. of liquor was 7.00 l. with, and 4 l. without the molasses. The alc. yield per metric ton of molasses was 475 l. The total alc. loss was as high as 20%. M. G. Moore

1ST AND 2ND ORDERS		PROCEDURES AND PROPERTIES INDEX		1ST AND 2ND ORDERS	
CA		The influence of fusel oils and their components on yeast. R. B. Seal. <i>Microbiology</i> (U. S. S. R.) 7, 63-103 (1958); <i>Chem. Zvesti.</i> 1940, 1, 3370. — The injurious effects of alcs. on the fermentation process are greater the higher the alc. in the homologous series. Isoamyl alc. produces a marked inhibition of the fermentation process at a concn. of 0.3% and stops the process completely at 0.6%. The corresponding values for BuOH are 1.0 and 1.5%; for PrOH 1.0 and 3.0-0.4%; for EtOH 5.0 and 12.0%. Fusel oils sharply retard fermentation at a concn. of 0.4% and inhibit it completely at a concn. of 0.7-0.8%. The growth of the yeast cells presents a similar picture. Isoamyl alc. strongly retards growth at a concn. of 0.1% and completely inhibits growth at 0.7%. Corresponding values for BuOH are 0.1 and 1.5%. The alc. also produces degenerative changes in the yeast cells. These changes consist essentially in the disappearance of the cell vacuoles and the formation of highly elongated, cup-shaped cells. These changes are for the most part observed in young cells. The morphological and physiol. changes described disappear entirely in later generations if the culture is grown again on ordinary media. M. G. Moore		16	
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION		FROM SOURCE		REALLY ONE OUT 151	
FROM SOURCE		REALLY ONE OUT 151		REALLY ONE OUT 151	

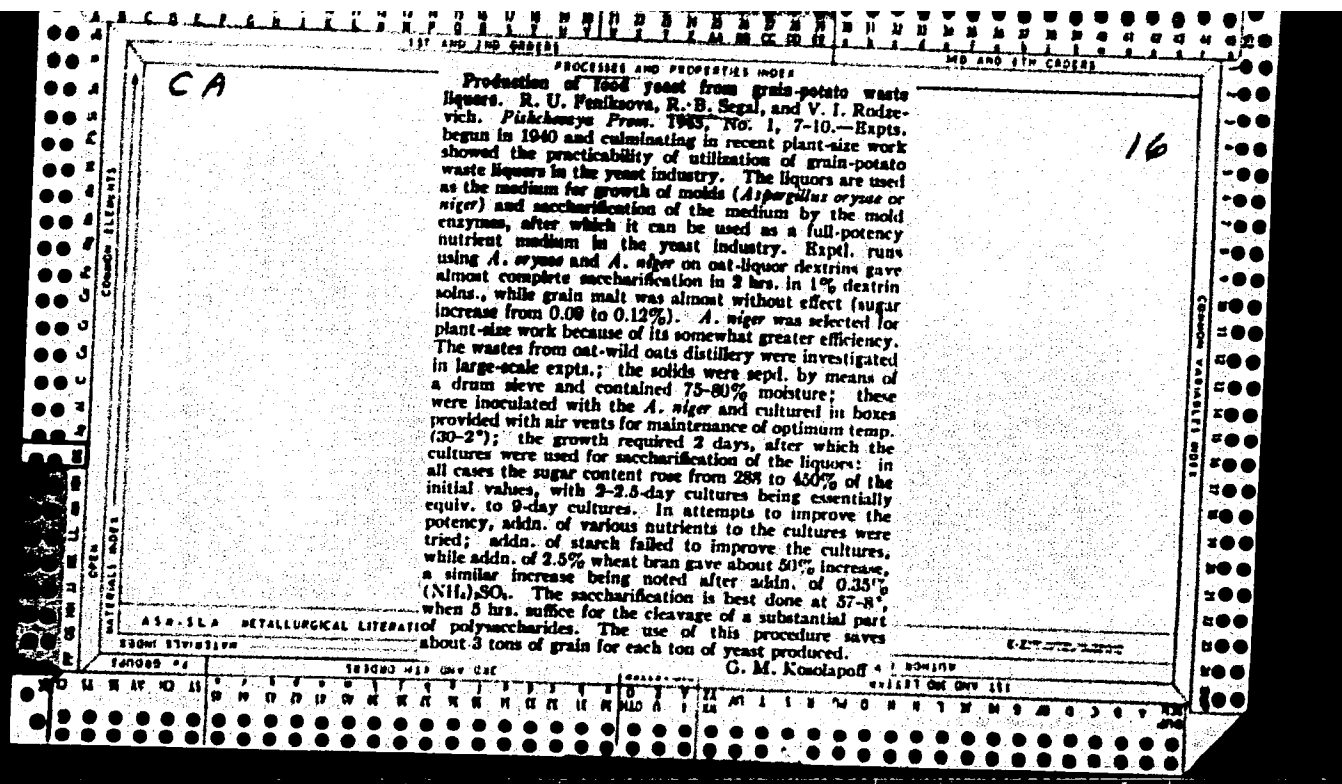
SMAL', R. B.

"The Influence of Higher Alcohols on Yeast," Mikrobiol., 8, Nos. 3-4, 1959. Abstr. All-Union Sci. Res. Inst. Alcohol Industry, Moscow, -1959-.

Activators of alcoholic fermentation. F. N. Chintova.
Microbiology (U. S. S. R.) 8, No. 3-4, 445-57 (1969).
A large no. of products of protein decomposition, contained
in autolyzed yeast, and a no. of yeast organisms with

various fermenting powers were investigated from the point of view of activation and cytological and morphological observations of the yeast cell were made. The cultivation of yeast in whole media under conditions of respiration accumulates less of the Z substance than under conditions of fermentation. Yeasts of smaller fermenting power contain less of the Z substance. The organelles of the cells (the nuclei and chromosomes) change during activation in the direction characteristic of the fermentation period. The growth factors (vitamin B₆, L-alanine and biotin) do not activate fermentation. The content of glycogen is sharply reduced in the cells during activated fermentation by yeast exts. These data are discussed in relation to the factor Z as a specific activator of alcoholic fermentation to the nonidentity of the factor Z and biosynthesis to the nonidentity of the factor Z and biosynthesis. The effect of the higher alcohols on yeast. R. B. Sygal. *Izv. Vuzov*. - The toxic action of the higher alcs. on yeast is manifested more the higher the position of the alc. in the homologous series. Lethal concns. for *Saccharomyces cerevisiae* XII are: propyl alc. 8%, butyl alc. 1.5% and isoamyl alc. 1.7%. The action of the higher alcs. on the yeast cells is accompanied by deep morphological and structural changes which interfere with their physiological functions. Through *Khim. Referat. Zhur.* 1930, No. 12, 36. W. R. Henn

W. R. Hunt



FENIKSOVA, R.V.; SEGAL, R.B.; RODZEVICH, V.I.; SHILOVA, A.A.

Aspergillus molds as producers of amylase. II. Amylase activity of Aspergillus oryzae as related to culture conditions on natural solid media. Mikrobiologiya 22, 145-50 '53. (MLRA 6:3)
(CA 47 no.22:12523 '53)

1. All-Union Research Inst., Alcohol Ind., Moscow.

Segal, R.B.

Aspergillus as amylase producer. III. Influence of growth conditions on formation of conidia by *Aspergillus oryzae*. R. V. Peniksova and R. B. Segal (All-Union Sci. Research Inst. Alc. Ind., Moscow). *Mikrobiologiya* 22, 643-60 (1953); cf. C.A. 47, 12523d. —When grown in layers (2.5-4.5 cm. thick) of wheat bran, *A. oryzae* does not form conidia throughout the layer unless porosity is increased by about 30% of inert matter, e.g., oat husks. The optimum atm. humidity for conidial growth is 90-95% and maintaining this humidity is a leading factor in forming conidia. Elimination of CO₂ from the atm. is favorable, but not a decisive factor. Julian F. Smith

BRONSHTEY, I.M.; SEGAL', R.B.

Nonelastic scattering of electrons from oxidized metal surfaces.
Radiotekh. i elektron. 5 no.10:1741-1742 O '60. (MIRA 13:10)
(Electrons--Scattering) (Secondary electron emission)

SEGAL', R. B.

Distribution by size of light ions in the air. Izv. vys.
ucheb. zav.; fiz. no.6:16-21 '62. (MIRA 16:1)

1. Cherepovetskiy gosudarstvennyy pedagogicheskiy institut.

(Air, Ionized)

1503
S/139/62/000/006/003/032
E039/E435

3.513/
26251

AUTHOR:
TITLE:

Segal', R.B.

The distribution, according to size, of small ions in the atmosphere

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika, no.6, 1962, 16-21

TEXT: The so-called small ions, which play a major part in determining the electrical conductivity of air, are formed from simple ions with a number of water, and possibly O₂ and N₂, molecules attached. The question of the composition and size of small ions is extremely complex and published data is sometimes inconsistent. A theoretical estimate of the size distribution of these small ions, which leads to the following expression, is therefore made.

$$\frac{n_{I,IA}}{n_I} = \left[n_A \left(\frac{kT}{2\pi m_A} \right)^{3/2} \frac{1}{v_{AA}^2 \cdot v_{I,A}} \right] \cdot e^{\frac{U_{I,IA}}{kT}} \left(\frac{2\pi}{kT} m_A v_0^2 \right)^{3/2} v_{AA}^2 v_{I,A} \cdot 8\pi^2 K. \quad (10) \quad (10)$$

Card 1/2

S/139/62/000/006/003/032
E039/E435

The distribution ...

where the suffix A denotes molecules of water and l their number; I the simple ion; n_A the number of molecules of water per unit volume; m_A the weight of the water molecule; k Boltzmanns constant; T the absolute temperature; U depth of the potential hole; ν_{AA} the frequency of vibration of water molecules relative to one another; K is a coefficient and r_0 is the distance between particles in the complex. Estimates are made for air at 300°K, $r_0 = 4 \text{ \AA}$ and relative humidities of 40 and 4%. It is shown that for 40% relative humidity the majority of small ions are complexes of 13 particles (12 molecules and 1 ion). This result is in agreement with the experiments of H.L.Wright and R.A.Allik and also with the earlier opinion of L.B.Loeb. At 4% relative humidity most of the small ions form a complex of 3 to 4 molecules. Again this is in agreement with the experimental data of H.A.Erikson and the later opinion of L.B.Loeb. The calculations also show that the positive ions are larger than the negative ions. This follows from the difference in their mobilities. There are 1 figure and 1 table.

ASSOCIATION: Cherepovetskiy gospedinstitut (Cherepovets State Pedagogic Institute)

SUBMITTED: May 19, 1961

Card 2/2

SEGAL, R.B.

Calculation of the number of van der Waals' complexes in vapors. R. B. Segal and Ya. I. Frenkel (Leningrad Polytech. Inst.). *Zhur. Khim. i Teor. Fiz.* 21, 612-7 (1951). — Frenkel has derived an equation describing the transition of a vapor from a nonsatd. to a supersatd. state (*Kinetic theory of viscosity* 1945, p. 342). This derivation is based on the not-yet-verified assumption that fluctuations of small complexes of mols. occur. In the present paper a theory of such complexes is given. An explicit expression is derived for the no. of such complexes N , which consist of n small no. g of mols. The formation of these complexes is ascribed to the van der Waals' forces. N is primarily a function of g and the d. and temp. of the vapor. The van der Waals' binding energy h_v is assumed to be smaller than kT , so that a classical treatment is permissible. Numerical calcs. are carried out for Ar, H₂O, HCl, and Ca. For instance, in water vapor near the crit. point the no. of such complexes/cc. is for $g = 2, 3, 4, 5$: $6 \times 10^{10}, 4 \times 10^{11}, 2 \times 10^{12}, 6 \times 10^{13}$. It is suggested that optical methods could be used to study such complexes. R. Gora

S. G.
Section 2

536.421.4
6488. Number of drops formed on condensation, and the time taken for their formation. *R. B. SPITAL. Zh. Eksp. Teor. Fiz.*, 28, 314-20 (No. 7, 1951) *In Russian*.
With the help of the Zeldovich formula for the stationary "current" of drops generated in super-saturated steam, the number of such drops arising at complete condensation is found and also the time of their formation in the case of absence of a nucleus of condensation. The results of calculation are compared with those obtained in operation of Wilson chambers.
N. GULLILAND

SOV/20-123-4-17/53
Free Path of Slow Secondary Electrons in a Metal and the Part Played by Inelastically Reflected Electrons in the Secondary Electron Emission

of an apparatus of the type of a spherical condenser with an antidynatron grid. Thin layers of various metals are sprayed on to a target in a vacuum of from $5 \cdot 10^{-8}$ torr to 10^{-7} torr at a previously gauged velocity. The variations of σ and η of these thin layers were measured at the energies of the primary electrons of from $E_p = 0.1$ to 3.6 kev. The coefficients σ and η for Be are by several orders smaller than the same quantities for Pt, Ag and Bi. If the thickness of the layer changes at $E_p = \text{const}$, the coefficients δ and η at the same time become greater. A diagram shows the function $\delta(\eta)$ for the case in which thin Bi and Ag films are sprayed on to a beryllium base and Be films are sprayed on to a platinum base. The temperature of the base was -180° . At low energies ($E_p \sim 600$ ev) this function has the shape of a straight line, but at high energies ($E_p = 3,600$ ev) it has the shape of a broken line consisting of 2 rectilinear sections. At $E_p = \text{const}$ the boundary values of δ and η corresponding to a massive layer of the sprayed metal are attained simultaneously at one

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SOV/20-123-4-17/53

Free Path of Slow Secondary Electrons in a Metal and the Part Played by Inelastically Reflected Electrons in the Secondary Electron Emission

and the same thickness d of the layer. The course of the function $\delta(\eta)$ for bismuth - and silver films can be explained qualitatively as follows: As long as it holds that $d \leq \lambda_2$, δ will increase with an increasing thickness d of

the layer due to the increase of the following quantities:
 1) The quantity of slow secondary electrons produced immediately by primary electrons. 2) The quantity of inelastically scattered and inelastically reflected electrons (η) and 3) the "efficiency" of each inelastically scattered electron, which is proportional to d . Next, the course taken by the curves for beryllium films on a platinum base is explained. According to these and other experimental data discussed here the primary electron penetrating into the metal immediately produces a small quantity of secondary electrons. With increasing penetration of primary electrons into the depth of the metal an ever increasing number of inelastically scattered electrons is produced and a part (η) of them emerges into the exterior. The slow secondary electrons emerge from the thin superficial film (of the order of 10

Card 3/4

SOV/20-123-4-17/53

Free Path of Slow Secondary Electrons in a Metal and the Part Played by
Inelastically Reflected Electrons in the Secondary Electron Emission

atomic layers) and are essentially produced by inelastically
scattered electrons, i.e. they are in reality "tertiary"
electrons. There are 3 figures and 4 references, 3 of which
are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut
(Leningrad State Pedagogical Institute)

PRESENTED: July 21, 1958, by A. F. Ioffe, Academician

SUBMITTED: July 17, 1958

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SEGAL', R.B., Cand Phys Math Sci -- (diss) "Study of the
secondary electronic emission of thin layers of metal."
Len, 1959, 11 pp (Min of Education RSFSR. Len State
Pedagogical Inst in A.I. Gertsen. Chair of General Physics)
150 copies (TL, 35-59, 111)

- 8 -

66261

SOV/181-1-7-17/21

~~24(6)~~ 24,7600, 9.3/20

AUTHORS: Bronsteyn, I. M., Segal', R. B.

TITLE: The Secondary Electronic Emission of Tellurium

PERIODICAL: Fizika tverdogo tela, 1959, Vol. 1, No. 7, p 1133 (USSR)

ABSTRACT: Tellurium is atomized on a platinum target and the coefficient σ of the secondary electronic emission was measured as a function of the energy of the primary electrons E_p . The result of measurement is graphically recorded; it differs considerably from the statements in reference 1. Within the limits $E_p = 400$ to 500 ev a maximum for $\sigma = 1.22$ occurs, whereas in reference 1 $\sigma_{max} = 1.5 - 1.52$ held within the range of 600 - 1000 ev. The $\sigma(E_p)$ -curves for platinum, lead, germanium, and copper are in satisfactory agreement with publication data (Ref 2). There are 1 figure and 2 Soviet references.

SUBMITTED: August 20, 1958

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67310

SOV/181-1 -8-15/32

9-3) 9.3120

AUTHORS:

Bronshteyn, I. M., Segal', R. B.

TITLE:

Investigation of Electron Reflection From Some Metals

PERIODICAL:

Fizika tverdogo tela, 1959, Vol 1, Nr 8, pp 1246 - 1249 (USSR)

ABSTRACT:

The authors investigated the angular dependence of the coefficient η of inelastically scattered primary electrons, a subject which hitherto has not been dealt with at all. The secondary electron emission coefficient namely consists of the coefficient of slow secondary electrons δ and of η : $\sigma = \delta + \eta$. These inelastically scattered electrons may, according to L. N. Dobretsov (1) and T. L. Matskevich (Ref 1), play an important part in the production of slow true secondary electrons. The device consists of branchings for the target, an electron gun, molecule gun, and of a pump. The molybdenum target had the shape of a cylindrical basket with two plane bases made of tungsten and finely polished platinum. During work a vacuum of constantly at least $5 \cdot 10^{-8}$ torr was kept up by constant pumping-out. The electron beam was focused according to the glow of the willemite and by means of a Faraday cylinder. Accuracy of primary and secondary current measurement by means of separate galvanometers was ~ 0.3 to 0.5% . The curves are

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easily reproducible. The angular dependence of σ and η increases with rising primary electron energy E_p . Be has the highest angular dependence, which is characteristic of light elements. The curve ascertained by the authors for sprayed platinum runs somewhat higher (by about 10 to 15%) than the respective curve determined by Sternglass. However, the strong temperature dependence $\sigma(E_p)$ observed by Sternglass was not confirmed by the authors for platinum. The curves $\eta(E_p)$ with

$\psi = 0$ for Ag, Bi, W, and Be for the energy interval investigated here have been determined for the first time. For Ag, Bi, and W, these curves are in good agreement with the general scheme determined by Pulluel (Ref 2) and Sternglass (Ref 3). The course of $\eta(E_p)$ ascertained by T. L. Matskevich (Ref 7)

for dielectrics has not yet been observed in the case of metals. Two diagrams illustrate the function $\delta(\eta)$ when the angle of incidence ψ of the primary electron beam is measured for $E_p = \text{const}$. The relationship between δ and η is linear with $\delta = k\eta + A(E_p)$, where the constant A greatly depends

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on E_p . The slope of the straight line decreases slightly with increasing E_p , perhaps because the "efficiency" of non-elastically scattered primary electrons decreases with rising E_p with respect to the production of slow secondary electrons. By connecting all points corresponding to equal φ a curve is obtained all points of which characterize the secondary electron emission of the target for the respective E_p value in the $\delta\eta$ diagram. Description of secondary electron emission also gave data concerning the composition of the secondary electrons (δ and η). There are 7 figures and 7 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A. I. Gertsena (Leningrad State Pedagogical Institute imeni A. I. Gertsen)

SUBMITTED: August 5, 1958

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66328

SOV/181-1-10-1/21

~~24(6)~~ 24.7700

AUTHORS: Bronshteyn, I. M., Segal', R. B.

TITLE: Inelastic Electron Scattering and Emission of Secondary Electrons of Some Metals. I

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 10, pp 1489 - 1499 (USSR)

ABSTRACT: An evacuable glass bulb (experimental vacuum: $5 \cdot 10^{-8}$ torr) 170 mm wide is fitted with five long, cylindrical side arms, three of which contain molecule guns. An electron gun is housed within the fourth used to bombard the specimen holder in the bulb center (a platinum disk) with electrons. The electrons scattered there are gathered by a collector (inner wall of the glass flask) and conveyed to a sensitive ammeter. The molecule guns are used to vaporize Be, Bi, Ag, Ca, and Mg on the platinum disk. The range of primary electrons in the vaporized metals, the range of slow secondaries and other parameters related to inelastic electron scattering are measured for these layers. Each metal was separately investigated, several layers of one metal being vaporized on the disk in each experiment. The dependences $\sigma(E_p)$ and $\eta(E_p)$

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(E_p = primary electron energy, σ = secondary electron emission coefficient; energy variation by the electron gun) were measured for all layers. For results of figures 2-6. The curves of the other metals are very similar to that of Be. Figures 7-8 illustrate the dependence $E_p = f(l)$ (l = range) of Be. For Be it assumes the form $l \propto E_p^n$, where $n \approx 1.5$ for

$E_p > 800$ ev. Figure 9 shows the diagram δ (measure of the number of slow secondaries) - η for Be (vaporized on platinum) at - 180°C. Figure 10 presents the same diagram for Be vaporized on silver. The regions of reflection in the two diagrams correspond with a layer thickness of ~ 12 (Fig 9) and ~ 14 (Fig 10) atomic layers. This is in agreement with the slow-electron range (0-15 ev) in Be. It holds: $\lambda \ll 10$ atomic layers for Ca, Mg $\ll 20$ atomic layers for Mg (Figs 12,13). The thickness of the layers to be measured was determined from the thickness of the standard layers which had been produced together with the former. The results of measurement

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Inelastic Electron Scattering and Emission of Secondary
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obtained by Dobretsov and Matskevich are utilized for comparison. A microbalance developed by the VNII im. D. I. Mendeleyeva (All-Union Scientific Research Institute imeni D. I. Mendeleyev) was used for weighing. Dobretsov and Matskevich are referred to in this article. There are 13 figures, 2 tables, and 20 references, 9 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im.
A. I. Gertsena (Leningrad State Pedagogical Institute imeni
A. I. Gertsen)

SUBMITTED: August 20, 1958

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66329

SOV/181-1-10-2/21

~~24(6)~~ 24,7700

AUTHORS: Bronshteyn, I. M., Segal', R. B.

TITLE: Inelastic Electron Scattering and Emission of Secondary Electrons of Some Metals. II

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 10, pp 1500 - 1508 (USSR)

ABSTRACT: This article, continued from Fizika tverdogo tela, 1959, Vol 1, Nr 10, pp 1489 - 1499, reports on the results of measurement obtained for the following metals: $\sigma(E_p)$ and $\eta(E_p)$ for Bi layers on beryllium. Layer thickness: 2.5-82.5 atomic layers and solid material (Figs 1-2). The dependence $l(E_p)$ for Bi (Fig 3). $\sigma(E_p)$ and $\eta(E_p)$ for silver layers on beryllium. Layer thickness: 1-190 atomic layers and solid material (Figs 4-5). Dependence $l(E_p)$ for Ag (Fig 6). Diagram $\delta-\eta$ for Bi and Ag layers on beryllium (Figs 7-8). Figures 9-10 show $\sigma(E_p)$ for Bi on platinum, and figure 11 the same for Bi on silver. The dependence $\sigma(E_p)$ for Ag on

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